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## Hanford Waste Treatment Plant sets massive protective shield door in Pretreatment Facility

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**Richland, Wash.** -- Earlier this week, an enormous protective shield door was set in the Pretreatment Facility at the Hanford Waste Treatment Plant, also known as the "Vit Plant." The 102-ton door was lowered through the roof and placed on top of an adjoining 85-ton door that was installed at the end of December.

"This installation was particularly complex due to the size, shape and layout of these two massive doors; it required extensive planning by our skilled craft and engineers," Ty Troutman, area project manager for the facility, said.

The carbon steel doors come together to form an upside-down L-shape. The upper, heavier door is oriented horizontally and will be the largest in any Vit Plant facility. It measures 52 feet wide and 15 feet tall. The lower door is oriented vertically and measures 15 feet wide and 27 feet tall. Both are 10 inches thick, including a 1/8-inch-thick stainless steel liner. They were manufactured by Oregon Iron Works, Inc. in Portland, Ore.

"Setting these doors, as well as the overhead crane last month, marks a transition in the Pretreatment Facility from a civil construction focus to mechanical installations," Wahed Abdul, Department of Energy (DOE) federal project manager for the Pretreatment Facility said. "This will enable us to complete construction in 2016 and reach operations by 2019."

The doors will be controlled using three giant motorized drive screws--two in the upper and one in the lower door. The screws are 20 feet long and approximately 3 inches in diameter. The upper door will slide open and closed vertically, and the lower door will slide horizontally.

The doors separate the canyon-like center of the Pretreatment Facility, known as the "hot cell," from a maintenance area that will be used to service an overhead crane and remote-handling equipment. When operational, the hot cell will be used for the waste separations process and will be highly radioactive and inaccessible by humans. All hot cell maintenance will be performed using the crane and remote-handling equipment.

A third shield door separates the maintenance area from the rest of the Pretreatment Facility. The two doors installed recently and the third door will never be open at the same time.

The Pretreatment Facility is the largest of the Vit Plant's four major nuclear facilities and the first step in the vitrification process. Construction of the facility is currently 34 percent complete.

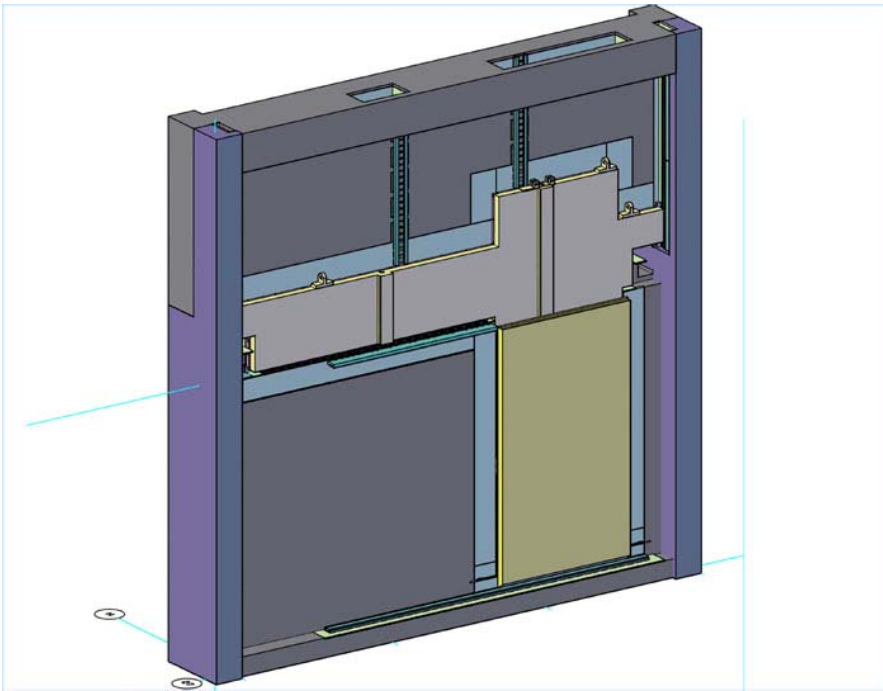
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*Bechtel National, Inc. is designing and building the world's largest radioactive waste treatment plant for the U.S. Department of Energy at the Hanford Site in southeastern Washington state. The \$12.2 billion Waste Treatment and Immobilization Plant (WTP), also known as the "Vit Plant," will immobilize the radioactive liquid waste currently stored in 177 underground tanks using a process called "vitrification."*

*Vitrification involves blending the waste with molten glass and heating it to high temperatures. The mixture is then poured into stainless steel canisters. In this glass form, the waste is stable and impervious to the environment, and its radioactivity will dissipate over hundreds to thousands of years.*

*The WTP will cover 65 acres with four nuclear facilities -- Pretreatment, Low-Activity Waste Vitrification, High-Level Waste Vitrification and Analytical Laboratory -- as well as operations and maintenance buildings, utilities and office space.*

*Construction of the WTP began in 2001 and is now 58 percent complete. Construction is scheduled to be complete in 2016 and operational in 2019.*



(Photo 1 of 2) The carbon steel doors come together to form an upside-down L-shape. The 102-ton door was set on top of the 85-ton door that was installed at the end of December.



(Photo 2 of 2) The 102-ton shield door measures 52 feet wide and 15 feet tall.

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